

Serial No.: 10/028,647
Examiner: Philip J. Chea

In the claims:

Please cancel claim 20.

Please amend the claims as follows:

1. (currently amended) A communication network comprising:
 - at least two switches, each switch being capable of maintaining a database of VLAN membership, with said first switch utilizing a first source learning function to maintain the database of VLAN membership, and said second switch using a second source learning function to maintain the database of VLAN membership, wherein said first source learning function is independent to said second source learning function;
 - a backbone network interconnecting the switches; and
 - at least one network node coupled to at least one of the switches,wherein the VLAN membership databases in said at least two switches are synchronized with one another via a VLAN advertisement protocol.
2. (original) The communication network according to claim 1, wherein VLANs and the VLAN membership are dynamically provisioned across the backbone network.
3. (original) The communication network according to claim 1, wherein VLANs and the VLAN membership are statically provisioned across the backbone network.
4. (original) The communication network according to claim 1, wherein when coupling of said at least one network node is moved from a first switch to a second switch, the second switch is capable of advertising the move.
5. (original) The communication network according to claim 4, wherein the first switch is capable of learning of the move, whereby the first switch does not go through a full time out period.

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6. (original) The communication network according to claim 1, wherein a protocol between said at least two switches has topology discovery capability.

7. (previously presented) The communication network according to claim 6, wherein the topology discovery capability comprises a capability to learn topology connectivity as to which port is connected to which other port.

8. (original) The communication network according to claim 6, wherein the topology discovery capability comprises a capability to learn topology connectivity of at least one selected from a group consisting of IP addresses, MACs and VLANs.

9. (original) The communication network according to claim 1, wherein when a second switch is reachable through a plurality of IP addresses by a first switch, the first switch is capable of learning that the IP addresses are on the second switch with a plurality of addressable interfaces, each addressable interface corresponding to one of the IP addresses.

10. (original) The communication network according to claim 1, wherein the VLAN membership is determined by applying at least one policy with precedence policy to a specific traffic.

11. (original) The communication network according to claim 1, wherein at least one switch is capable of automatically discovering network nodes in the network.

12. (original) The communication network according to claim 1, wherein at least one switch advertises connectivity of at least one network node across at least a portion of the backbone network.

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13(currently amended). The communication network according to claim 7, wherein a network node is moved from a first port to a second, and wherein the ~~learned entries and a~~ VLAN membership for the network node are is remembered.

14. (original) The communication network according to claim 13, wherein a first switch includes the first port and a second switch includes the second port.

15(currently amended). A communication network comprising:
at least two switches, each switch being capable of maintaining a MAC table, with said first switch utilizing a first source learning function to maintain the MAC table, and said second switch using a second source learning function to maintain the MAC table, wherein said first source learning function is independent to said second source learning function;
a backbone network interconnecting the switches, said backbone network utilizing a VLAN advertisement protocol; and
at least one network node coupled to at least one of the switches,
wherein said at least two switches exchange MAC information, wherein at least one switch uses the MAC information from at least one other switch to update its MAC table.

16. (original) The communication network according to claim 15, wherein at least one switch generates a frame that contains a unique ID.

17. (original) The communication network according to claim 15, wherein at least one switch builds an adjacency table.

18. (original) The communication network according to claim 15, wherein at least one switch advertises its VLAN membership information.

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19. (original) The communication network according to claim 15, wherein at least one switch generates a frame that includes a list of at least one virtual router port in that switch.

20. canceled.

21(currently amended). A method of updating a VLAN database, the method comprising:

at a first switch maintaining a database of VLAN membership utilizing a first source learning function

at a second switch maintaining a database of VLAN membership, and said second switch using a second source learning function, wherein said first source learning function is independent to said second source learning function;

transmitting at least one update message from the a first switch via a VLAN advertisement protocol;

receiving said at least one update message at the a second switch;

checking at least one entry in said at least one update message against the VLAN database in the second switch; and

if a new entry is found, updating the VLAN database with the new entry.

22. (original) The method according to claim 21, further comprising automatically discovering at least one network node.